Institute for Computing in Science (ICiS)
Summer Session 2011, Park City, Utah

Genomics Driving Modeling in Biology Workshop
July 23-30, 2011

A note from the organizers:
On Monday, we will walk the whole group through the plan and provide some overview of how we want the week to work. As an introduction, please prepare a "one slide" overview of your research interests and what you want to get from the meeting. We will spend some time with these issues before we get going and have therefore only one inspirational talk planned for the first day.

Tuesday onward, we will start each day with two 45-minute inspirational talks (including Q&A and general interaction) aimed at bringing you up to speed on the current thinking on the given topic. These talks will be tutorial in nature and layout the big questions, the current approaches to addressing these questions, and the open problems that lie before us. After this 90-minute session, we will use the remaining time to address three cross cutting themes that will connect to the five topics over the week. The idea is we will have discussion leaders for each of these three themes that will try to keep us moving and make sure that we involve all the expertise in the room in the conversation. The cross cutting themes we propose are:

1. **Modeling approaches, methods and technology** (coordinators: Vassily Hatzimanikatis and Paramvir Dehal)
2. **High-throughput data, analysis methods and linkage to experiment** (coordinators: Nathan Price and Adam Feist)
3. **New biology** (coordinators: Rob Edwards and Gary Olsen)

A note on the afternoon meeting structure: To ensure that we have lively discussions and to help frame the questions for the groups to work on during the afternoons and evenings, we would like the people designated above to help with the crosscutting themes. The idea here is to help shepherd the discussions, to come up with questions to drive the conversations forward, and to coordinate any spontaneous supporting talks that you feel might be needed to further dive into the issues.

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Week 2—Genomics Driving Modeling in Biology, July 23-30, 2011

Saturday, July 23	All Day	Arrival Day – check-in with onsite ICiS staff	ICiS Office
Sunday, July 24	10:00-11:00	Brunch – Meet & Greet	Bear Claw
	11:00 – 12:30	Continuing Meet and Greet	Parlor 2 & 3
	7:00 PM	Orientation in Lounge Room	Suite
Monday, July 25	8:00-9:30	Breakfast	Bear Claw
	9:30-10:30	Introductions and aspirations for the week	Parlor 2 & 3
	10:30-11:30	One-slide introductions from all participants	
	11:30-11:45	Break	Bear Claw
	11:45-12:30	***Inspirational Talk:*** *Barny Whitman – "The long view of prokaryotic diversity"*	
	12:30-1:30	Lunch	Silverado Pool/ Bear Claw
	1:30-3:00	Afternoon session	Parlor 2 & 3
	3:00-3:15	Break	Bear Claw
	3:15-5:30	Afternoon session cont'd	
	6:00pm	Shuttle bus to Park City– dinner on your own	
Tuesday, July 26	***Single Genome Modeling***		
	8:00-9:30	Breakfast	Bear Claw
	9:30-9:45	Introduction and Housekeeping (Rick)	Parlor 2 & 3
	9:45-10:30	***Inspirational Talk:*** *Costas Maranas "Challenges and Opportunities in Reconstructing an Analyzing Genome-Scale Metabolic Models"*	
	10:30-11:00	Break	Bear Claw
	11:00-11:45	***Inspirational Talk II:*** *Chris Henry* -- "*Insights from Modeling of Diverse Genomes and Driving Models Beyond Metabolism"*	
	11:45-12:30	Discussion	
	12:30-1:30	Lunch	Silverado Pool/ Bear Claw

	1:30-3:00	Afternoon session	Parlor 2 & 3
	3:00-3:15	Break	Bear Claw
	3:15-5:30	Afternoon session cont'd	
	Evening	Open Discussions and Socializing	Suite
Wednesday, July 27	8:00-9:30	Breakfast	Bear Claw
	9:30-9:45	Introduction and Housekeeping (Rick)	Parlor 2 & 3
	9:45-10:30	***Inspirational Talk:*** *Michael McClelland -"A Strategy for Driving the Improvement of Annotations Based on Analysis of Clusters of Closely-Related Genomes".*	
	10:30-11:00	Break	Bear Claw
	11:00-11:45	***Inspirational Talk II:*** *- Ross Overbeek – (Talk I continued).*	
	11:45-12:30	Discussion	
	12:30-1:30	Lunch	Silverado Pool/ Bear Claw
	1:30-3:00	Afternoon session	Parlor 2 & 3
	3:00-3:15	Break	Bear Claw
	3:15-5:30	Afternoon session cont'd	
	Evening	Open Discussions and Socializing	Suite
Thursday, July 28	8:00-9:30	Breakfast	Bear Claw
	9:30-9:45	Introduction and Housekeeping (Rick)	Parlor 2 & 3
	9:45-10:30	***Inspirational Talk:*** *Krishna Mahadevan – Dynamic Genome Based Modeling of Microbial Communities in Sub-surface Environments*	
	10:30-11:00	Break	Bear Claw
	11:00-11:45	***Inspirational Talk II:*** *Jack Gilbert – Predicting microbial community dynamics using community derived metagenomic data*	
	11:45-12:30	Discussion	
	12:30-1:30	Lunch	Silverado Pool/ Bear Claw
	1:30-3:00	Afternoon session	Parlor 2 & 3

	Evening	Open Discussions and Socializing	Suite
Friday, July 29	8:00-9:30	Breakfast	Bear Claw
	9:30-9:45	Introduction and Housekeeping (Rick)	Parlor 2 & 3
	9:45-10:30	***Inspirational Talk:*** *Christopher Quince* and *Mick Follows* -- two talks that address couple models of the large-scale physical environment with models of microbial populations and communities. These talks ideally would draw upon all that has been discussed during the week and pull things together, but also open up new questions for the group to discuss.	
	10:30-11:00	Break	Bear Claw
	11:00-11:45	***Inspirational Talk:*** *Mick Follows Modeling the ecology and biogeochemical function of marine microbes at the global scale.*	
	11:45-12:30	Discussion	
	12:30-1:30	Lunch	Silverado Pool/ Bear Claw
	1:30-3:00	Afternoon session	Parlor 2 & 3
	3:00-3:15	Break	Bear Claw
	3:15-5:30	Afternoon session cont'd	
	6:00-8:00	Group Dinner	Painted Horse in Grand Summit Hotel
	Evening	Open Discussions and Socializing	Suite
Saturday, July 30	9:00-10:00 am	Breakfast/Closing remarks and next steps	Bearclaw
		Departure Day	